A SHORT DISCOURSE CONCERNING *Peſtilential Contagion*, AND THE METHODS To be uſed to Prevent it.

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The FIFTH EDITION.

LONDON:
Printed for *Sam. Buckley* in *Amen-Corner*, and *Ralph Smith* at the *Royal-Exchange*, 1720.

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MVSEVM
BRITAN
NICVM

TO THE

RIGHT HONOURABLE

James Craggs, Esq;

ONE OF

His MAJESTY's Principal Secretaries of State.

SIR,

I Most humbly offer to You my Thoughts concerning the Prevention of the Plague, *which I have put together*

by your Command. As ſoon as you was pleaſed to ſignify to me, in his Majeſty's *Abſence; that their Excellencies the* Lords Juſtices *thought it neceſſary for the Publick Safety, upon the Account of the* Sickneſs *now in* France, *that proper Directions ſhould be drawn up to defend our ſelves from ſuch a Calamity; I moſt readily undertook the Task, though upon ſhort Warning, and with little Leiſure: I have therefore rather put down the* principal Heads of Caution, *than a* Set of Directions in Form.

THE

THE first, *which relate to* the performing Quarentines, *&c. You, who are perfectly verſed in the Hiſtory of* Europe, *will ſee are agreable to what is practiſed in other Countries, with ſome new Regulations.* The next, *concerning the* ſuppreſſing Infection here, *are very different from the Methods taken in former Times among* Us, *and from what they commonly Do* Abroad: *But, I perſuade my ſelf, will be found agreable to Reaſon.*

I moſt

I moſt heartily wiſh, that the wiſe Meaſures, the Government *has already taken, and will continue to take, with Regard to the* former *of theſe, may make the* Rules *about the* latter *unneceſſary: However it is fit, we ſhould be always provided with proper* Means of Defence *againſt ſo terrible an* Enemy.

May this ſhort Eſſay *be received as one Inſtance, among many others, of the Care, you always ſhew for Your Country; and as a*

Teſti-

DEDICATION.

Testimony of the great Esteem and Respect, with which I have the Honour to be,

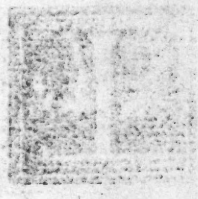
SIR,

Your most obedient,

Most humble Servant,

Novemb. 25. 1720.

R. MEAD.



DEDICATION

PART I.

OF THE NATURE OF *CONTAGION.*

HAT the Reaſonableneſs of any Method, which ſhall be propoſed to prevent the ſpreading of *Contagious* Diſeaſes, may the better appear, it is neceſſary to premiſe ſomewhat in general concerning *Conta-*

gion, and the Manner, by which it acts.

CONTAGION is propagated by three Cauſes, *the Air*; *Diſeaſed Perſons*; and *Goods tranſported from infected Places*.

WE ſhall therefore firſt enquire what alteration of the *Air* it is, that makes it *infectious*; and then, by what Means it communicates its noxious Quality to other Bodies.

THE ancienteſt and beſt Authors of Phyſick, who lived in a Country more expoſed to theſe Calamities than ours, obſerved the Conſtitution of the *Air*, which precedes *Peſtilential Fevers*, to be great *Heat* attended with much *Rain* and *Southerly Winds* *: And one of Them takes particular Notice, that no o-

* Vid. Hypocrat. Epidem. lib. 3.

ther

ther than a *moiſt* and *hot* Temperament of the *Air* brings the *Plague*; and that the Duration of this Conſtitution is the Meaſure of the Violence of the Diſtemper *.

THE Natural Hiſtory of ſeveral Countries confirms this Obſervation; in *Africa* particularly, if Showers fall during the ſultry Heats of *July* and *Auguſt*, the *Plague* enſues thereupon, with which whoſoever is infected hardly eſcapes †.

IT has beſides been remarked in all Times, that the Stinks of *ſtagnating Waters* in hot Weather, *putrid Exhalations* from the Earth; and above all, the Corruption of dead *Carcaſſes* lying unburied, have occaſioned *infectious Diſeaſes*.

* Galen. de Temperament. lib. 1 cap. 4 & Comment. in Epid. l. 3.
† Vide J. Leon. Hiſtor. Afric. lib. 1.

FROM hence it appears to be a *Concurrence* of Cauſes, that produces Diſeaſes of this Kind; which muſt not only meet, but exert their Force together for a conſiderable time. And when this happens, their firſt Effect is a Degree of *Stagnation* in the Air, which is afterwards followed by *Corruption* and *Putrefaction*.

AND upon this account it is, that thoſe Countries are chiefly liable to theſe Calamites, where not only the *Heats* are very great, and the *Weather* continues long in the ſame State; but the *Winds* (the Uſe of which is by Motion to purify the Air) do not ſhift and change ſo often as they do in Northern Climates.

INDEED *Plagues* ſeem to be of the Growth of the *Eaſtern* and *Southern*

Parts

Parts of the World, and to be transmitted from them into colder Climates by the Way of *Commerce*. Nor do I think, that in this *Island* particularly there is any one Instance of a *Peſtilential* Diſeaſe among us of great Conſequence; which we did not receive from other *Infected* Places.

This I the rather mention, becauſe it is a common Opinion, and propagated by Authors of great Name, that we are uſually *viſited* with the *Plague* once in 30 or 40 Years; which is a mere Fancy without any Foundation either in Reaſon or Experience: and therefore People ought to be delivered from the Subjection to ſuch vain Fears.

On the contrary, though we have had ſeveral Strokes of this kind, yet there are Inſtances of bad

bad *Contagions* from abroad being brought over to us, which have proved leſs malignant here by our Air not being diſpoſed to receive ſuch Impreſſions.

THE *Sweating Sickneſs*, called the *Sudor Anglicus* and *Febris Ephemera Britannica*, becauſe it was commonly thought to have taken its Riſe here, was moſt probably of a foreign Original, and no other than a *Plague* abated in its Violence by the mild Temperament of our Climate.

FOR, we learn from Hiſtories, that the firſt time this was felt here, which was in the Year 1485, it began in the Army, with which King *Henry* VII. came from *France*, and landed in *Wales* *; and it was then thought to have been brought

* Vid. Caium de Febre Ephemera Britannica.

into

into *France* from the famous Siege of *Rhodes* by the *Turks* 3 or 4 Years before. And of the four Returns, which this has made ſince that Time; two, viz. *thoſe* in the Years 1527, and 1528, may very juſtly be ſuſpected to have been owing to the *Peſtilence*, which at thoſe Times raged in *Italy*, particularly at *Florence* and *Naples*†. And the others were very probably from a *Turkiſh* Infection.

I call this Diſtemper a *Plague* with leſſened Force, becauſe the Symptoms of it were of that kind, though in a leſs Degree; as great *Faintneſs* and *Inquietudes*, inward *Burning*, *Pain* in the *Head*, a *Delirium*, &c. All which were accompanied with profuſe *Sweats*, and the Diſeaſe laſted but 24 hours. And

† Vid. Rondinelli Contagio in Firenze, & Summonte Hiſtor. di Napoli.

though

though for want of Care, and due Management many died of it; yet as a learned and wise *Historian** observes, *It appeared rather to be a surprize of Nature than obstinate to Remedies, for if the Patient was kept warm with temperate Cordials, he commonly recovered.*

And I cannot but take Notice, as a Confirmation of what I have been advancing, that we had here the same kind of Fever in the Year 1713, about the Month of *September*, which was called the *Dunkirk Fever*, as being brought by our Soldiers from that Place; where it was indeed a Malignant Disease attended with a *Diarrhœa*, *Vomiting*, &c. and probably had its Original from the Pestilential Distemper, which some time before broke

* *Lord* Verulam's *History of* Henry VII.

out

out at *Dantzick* and *Hamburgh*: But with us was much more mild, beginning only with a Pain in the Head, and by very eaſy Means went off in large *Sweats*, after a Day's Confinement.

THERE being in every Air a greater Diſpoſition to *Contagion* at one Time than another, we have indeed ſometimes felt this Calamity with greater Fury; as particularly the laſt time in the Year 1665; when it continued in this *City* about ten Months, and ſwept away by computation 97306 Perſons: But it was generally allowed, that the *Contagion* came by *Cotton* imported from *Turkey**; and the long Duration of it, I believe, may juſtly be charged upon the unhappy Management of infected Houſes, which

* Vide Hodges de Peſte.

was then directed by publick Authority; as I ſhall ſhew anon.

And the Hiſtory of the moſt terrible of all the Plagues, that ever were in theſe Parts of the World, which was that in the Year 1349, gives a manifeſt Proof from whence all *Europe* may trace the Origine of theſe Evils, viz. from *Aſia:* for † This taking its Riſe in *China* in the Year 1346, advanced through the Eaſt *Indies* to *Syria*, *Turkey*, *Ægypt*, *Greece*, *Africa*, &c. In 1347 ſome Ships from the *Levant* carried it to *Sicily*, *Piſa*, *Genoa*, &c. In 1348 it got into *Savoy*, *Provence*, *Dauphiny*, *Catalonia*, *Caſtile*, &c. In 1349 it ſeized *England*, *Scotland*, *Ireland*, and *Flanders*; and in the next place *Germany*, *Hungary*, and *Denmark*; and in all

† Vid. Hiſtor. Florent. di Matteo Villani.

theſe

theſe Countries made moſt incredible Havock.

But to return to the Conſideration of the Air, which we left in a putrid State: It is to be obſerved, that Putrefaction is a kind of Fermentation, and that all Bodies in a Ferment emit a volatile active Spirit, of Power to agitate, and put into inteſtine Motions, that is, to change the Nature of other Fluids into which it inſinuates it ſelf.

It were eaſy to ſhew from the beſt *Theory* of Fevers*, how the Alterations made in the *Blood* this Way will favour *Peſtilential* Diſeaſes, by rendring the Body obnoxious to them: But the Digreſſion would be too great.

* Vid. Bellini de Febrib.

THIS is one ſtep towards *Contagion*. The next, as it ſeems to me, proceeds after this Manner. The Blood in all *Malignant Fevers*, eſpecially *Peſtilential* ones, at the latter End of the Diſeaſe, does like Fermenting Liquors throw off a great Quantity of active Particles upon the ſeveral *Glands* of the Body, particularly upon thoſe of the Mouth and Skin, from which the Secretions are naturally the moſt conſtant and large. Theſe, in *Peſtilential* Caſes, although the Air be in a right State, will generally infect thoſe, who are very near to the ſick Perſon; otherwiſe are ſoon diſperſed and loſt: But when in an evil Diſpoſition of *This* they meet with the ſubtle Parts, its Corruption has generated, by uniting with them they become much more active and powerful, and likewiſe more

more durable and lasting, so as to form an *Infectious Matter* capable of conveying the Mischief to a great Distance from the diseased Body, out of which it was produced.

They who know what strange Attractions and Combinations are made by volatile Spirits will understand this Reasoning; especially if they consider, how easily all kinds of *Effluvia* are diffused in a warm Air, such as we have described an Infectious one to be; and further, of how penetrating a Force the finest Parts of Animal Juices are; of which the strange Stench of a mortified Limb, upon a Body yet living, will convince any one.

A corrupted State of Air is without doubt necessary to give these *Contagious Atoms* their full Force; for otherwise it were not easy to conceive

conceive how the *Plague*, when once it had ſeized any Place, ſhould ever ceaſe, but with the Deſtruction of all the Inhabitants: Which is readily accounted for by ſuppoſing an Emendation of the Qualities of the Air, and the reſtoring of it to a healthy State capable of diſſipating and ſuppreſſing the Malignity.

On the other hand it is evident, that *Infection* is not received from the Air it ſelf, however prediſpoſed, without the Concurrence of ſomething emitted from *Infected* Perſons; becauſe, by ſtrictly preventing all Intercourſe of Infected Places with the Neighbourhood, it may be effectually kept from ſpreading: Whereas the leaſt Wind muſt neceſſarily convey whatever noxious Quality reſides in the Air alone, even to a great Diſtance. Of this

we

we have had a freſh Proof in the preſent unhappy *Plague* in *France*, which, by keeping careful Guard, was confined for a conſiderable Time within the Walls of *Marſeilles*; ſo that none of the adjacent Villages ſuffered any thing by it; till at length ſome Perſons finding Means to eſcape carried the Infection along with them. And we find, they have been able, by the like Care, ſtill to reſtrain it within moderate Bounds.

THIS is the Manner by which Infectious *Effluvia* are generated: The Way, by which a ſound Perſon receives the Injury, I ſuppoſe moſt commonly to be this. Theſe *Contagious* Particles being drawn in with the Air we breath, they taint in their Paſſage the *Salival* Juices, which being ſwallowed down into the Stomach preſently fix their Malignity

lignity there; as appears from the *Nauſea* and *Vomiting*, with which the Diſtemper often begins its firſt Attacks. Though I make no Queſtion but the *Blood* is alſo more immediately affected by hurtful Particles being mixed through Inſpiration with it in the Lungs.

The third Way, by which we mentioned *Contagion* to be ſpread, is by *Goods tranſported from infected Places*. It has been thought ſo difficult to explain the Manner of *this*, that ſome Authors have imagined *Infection* to be performed by the Means of *Inſects*, the *Eggs* of which may be conveyed from Place to Place, and make the Diſeaſe when they come to be *hatched*. As this is a ſuppoſition grounded upon no manner of Obſervation, ſo I think there is no need to have Recourſe to it. If, as we have conjectured,

jectured, the *Matter of Contagion* be an active Subſtance, perhaps in the Nature of a *Salt*, generated chiefly from the Corruption of a *Humane Body*; it is not hard to conceive how this may be lodged and preſerved in ſoft, porous Bodies, which are kept preſſed cloſe together.

We all know how long a time *Perfumes* hold their *Scent*, if wrapt up in proper Coverings: And it is very remarkable, that the ſtrongeſt of theſe, like the *Matter* we are treating of, are moſtly *Animal* Juices, as *Moſch*, *Civet*, &c. and that the Subſtances found moſt fit to keep them in, are the very ſame with thoſe which are moſt apt to receive and communicate *Infection*, as, *Furrs*, *Feathers*, *Silk*, *Hair*, *Wool*, *Cotton*, *Flax*, &c. the greateſt Part of which are likewiſe of

the Animal Kind; which Remark alone may ſerve to lead Us a little into the true Nature of *Contagion*.

FROM all that has been ſaid, it appears, I think, very plainly, that the *Plague* is a real Poiſon, which being bred in the Eaſtern or Southern Parts of the World, maintains it ſelf there by circulating from *Infected* Perſons to Goods; which is chiefly owing to the Negligence of the People in thoſe Countries, who are ſtupidly Careleſs in this Affair: That when the Conſtitution of the Air happens to favour Infection, it rages there with great Violence; That at that Time more eſpecially diſeaſed Perſons give it to one another, and *Contagious Matter* is lodged in Goods of a looſe and ſoft Texture, which being packt up, and carried into other Countries, let out, when opened, the impriſoned

ſoned Seeds of Contagion: And laſtly, That the Air cannot diffuſe and ſpread theſe to any great Diſtance, if Intercourſe and Commerce with the Place infected be ſtrictly prevented.

PART II.

OF THE METHODS TO PREVENT *CONTAGION.*

AS it is a ſatisfaction to know, that the *Plague* is not a Native of our Country, ſo this is likewiſe an Encouragement to the utmoſt Diligence in finding out Means to keep our ſelves clear from It.

THIS

THIS Caution conſiſts of two Parts: *The preventing its being brought into our Iſland*; And, if ſuch a Calamity ſhould happen, *The putting a ſtop to its ſpreading among us.*

THE firſt of theſe is provided for by the eſtabliſhed Method of obliging Ships, that come from *Infected* Places, to *perform Quarentine*: As to which I think it neceſſary, that the following Rules be obſerved.

NEAR to our ſeveral Ports, there ſhould be *Lazarettos* built in convenient Places, on little Iſlands if it can ſo be, for the Reception both of Men and Goods, which arrive from Places ſuſpected of *Infection*: The keeping Men in *Quarentine* on board the Ship being not ſufficient;

cient; the only Uſe of which is to obſerve whether any dye among them. For *Infection* may be preſerved ſo long in Cloaths, in which it is once lodged, that as much, nay more of it, if Sickneſs continues in the Ship, may be brought on Shore at the End than at the beginning of the 40 Days: Unleſs a new *Quarentine* be begun every time any Perſon dies; which might not end, but with the Deſtruction of the whole Ship's Crew.

If there has been any *Contagious* Diſtemper in the Ship; The *Sound* Men ſhould leave their Cloaths; which ſhould be burnt; the Men waſhed and ſhaved; and having freſh Cloaths, ſhould ſtay in the *Lazaretto* 30 or 40 Days. The reaſon of this is, becauſe Perſons may be recovered from a Diſeaſe themſelves, and yet retain

Matter

Matter of *Infection* about them a conſiderable Time; as we frequently ſee the *Small-Pox* taken from thoſe, who have ſeveral Days before paſſed through the Diſtemper.

The *Sick*, if there be any, ſhould be kept in Houſes remote from the *Sound*; and ſome time after they are well, ſhould alſo be waſhed and ſhaved, and have freſh Cloaths; whatever they wore while Sick being burnt: And then being removed to the Houſes of the *Sound*, ſhould continue there 30 or 40 Days.

I am particularly careful to deſtroy the *Cloaths* of the Sick, becauſe they Harbour the very *Quinteſſence* of *Contagion*. A very ingenious Author * in his admirable

* Boccaccio Decameron. Giornat. prim.

Deſcription of the *Plague* at *Florence* in the Year 1348, relates what himſelf ſaw: That two *Hogs* finding in the Streets the *Rags*, which had been thrown out from off a poor Man dead of the Diſeaſe, after ſnuffling upon them, and tearing them with their Teeth, fell into Convulſions, and dyed in leſs than an Hour.

If there has been no Sickneſs in the Ship, I ſee no reaſon why the Men ſhould perform *Quarentine*. Inſtead of this, they may be waſhed, and their Cloaths aired in the *Lazaretto*, as Goods, for one Week.

But the greateſt Danger is from ſuch *Goods*, as are apt to retain Infection, ſuch as *Cotton*, *Hemp* and *Flax*, *Paper* or *Books*, *Silk* of all ſorts, *Linen*, *Wool*, *Feathers*, *Hair*, and all kinds of *Skins*. The *Lazaretto*

retto for theſe ſhould be at a Diſtance from that for the Men, and they muſt in convenient Warehouſes be unpackt, and expoſed, as much as may be, to the freſh Air for 40 Days.

This may perhaps ſeem too long; but as we don't know how much Time preciſely is neceſſary to purge the Interſtices of Spongy Subſtances from *Infectious Matter* by freſh Air, the Caution cannot be too great in this Point: Unleſs there could be a Way found out, without hazarding Men's Lives, of trying when Bodies have done emitting the Noxious Fumes; which poſſibly might be done by putting tender *Animals* near to them, particularly by ſetting little *Birds* upon the expoſed Goods; becauſe it has been obſerved in Times of the *Plague*, that the Country has been forſaken

by the *Birds*; and thoſe kept in Houſes have many of them dyed *. But the Uſe of this Fancy Experience only muſt ſhew; for I am well aware, that all *Plagues* do not indifferently affect all Kinds of living Creatures; on the contrary, moſt are confined to a particular *Species* of them; like the Diſeaſe of the *Black Cattle* a few Years ſince, which neither proved Infectious to other Brutes, nor to Men.

I take it for granted, that the *Goods* ſhould be *open'd*, when they are put into the *Lazaretto*, otherwiſe their being there will avail nothing. The Misfortune, which happened in the Iſland of *Bermudas* about 25 Years ſince, gives a Proof of this; where, as the Account

* Demerbroeck de Peſte, L. 1. C. 4.

has

has been given me by the learned Dr. *Halley*, a Sack of *Cotton*, put on Shoar by Stealth, lay above a Month without any Prejudice to the People of the Houſe, where it was hid; but when it came to be diſtributed among the Inhabitants, it carried ſuch a *Contagion* along with it, that the living ſcarce ſufficed to bury the Dead.

INDEED as it has been frequently experienc'd, that of all the Goods, which harbour *Infection*, *Cotton* in particular is the moſt dangerous, and *Turkey* is almoſt a perpetual *Seminary* of the *Plague*; I cannot but think it highly reaſonable, that whatever *Cotton* is imported from that Part of the World, ſhould at all Times be kept in *Quarentine*; becauſe it may have imbibed *Infection* at the Time of its packing up, notwithſtanding no Miſchief

has been felt from it by the Ship's Company.

As all reaſonable Proviſions ſhould be made both for the *Sound* and *Sick*, who perform *Quarentine*; ſo the ſtrict keeping of it ought to be inforced by the ſevereſt *Penalties*. And if a Ship come from any Place, where the *Plague* raged, at the Time of the Ship's Departure from it, with more than uſual Violence, it will be the ſecureſt Method to *Burn* all the *Goods*, and even the *Ship*.

Nor ought this further Caution to be omitted, That when the *Contagion* has ceaſed in any Place by the approach of Winter, it will not be ſafe to open a free Trade with It too ſoon: Becauſe there are Inſtances of the *Diſtemper's* being ſtopt by the Winter Cold, and yet the Seeds of it not deſtroyed, but only

only kept unactive, till the Warmth of the following Spring has given them new Life and Force. Thus in the great Plague at *Genoa* near 60 Years ago, which continued part of two Years; the first Summer about 10000 dyed; the Winter following hardly any; but the Summer after no less than 60000. So likewise the last *Plague* at *London* began the Autumn before the Year 1665, and was stopt during the Winter by a hard Frost of near three Month's Continuance; so that there remained no further Appearance of it till the ensuing Spring *. Now if Goods brought from such a Place should retain any of the latent Contagion, there will be Danger of their producing the same Mischief in the Place, to which they are brought, as they

* Hodges de Peste.

would

would have cauſed in that, from whence they came.

But above all it is neceſſary, that the *Clandeſtine Importing* of Goods be puniſhed with the utmoſt Rigour; from which wicked Practice I ſhould at this Time apprehend more Danger of bringing the *Diſeaſe* from *France*, than by any other Way whatſoever.

These are, I think, the moſt material Points, to which Regard is to be had in defending ourſelves againſt *Contagion* from other Countries. The particular Manner of putting theſe Directions in Execution, as the *Viſiting* of *Ships*, *Regulation* of *Lazaretto's*, &c. I leave to proper Officers, who ought ſometimes to be aſſiſted herein by able Phyſicians.

The next Conſideration is, What to do in Caſe, through a Miſcarriage in the publick Care, by the Neglect of Officers, or otherwiſe, ſuch a Calamity ſhould be ſuffered to befall us.

There is no *Evil* in the World, in which the great Rule of *Reſiſting the Beginning*, more properly takes place, than in the preſent Caſe; and yet it has unfortunately happened, that the common Steps formerly taken have had a direct Tendency to hinder the putting *this Maxim* in Practice.

As the *Plague* always breaks out in ſome particular Place, it is certain, that the Directions of the *Civil Magiſtrate* ought to be ſuch, as to make it as much for the Intereſt of Families to diſcover their Mis-

Misfortune, as it is, when a Houſe is on *Fire*, to call in the Aſſiſtance of the Neighbourhood: Whereas on the contrary, the Methods taken by the Publick, on ſuch Occaſions, have always had the Appearance of a ſevere *Diſcipline*, and even *Puniſhment*, rather than of a *Compaſſionate Care*: Which muſt naturally make the *Infected* conceal the Diſeaſe as long as was poſſible.

The main Import of the *Orders* iſſued out at theſe Times was, As ſoon as it was found, that any Houſe was infected, to keep it ſhut up, with a *large red Croſs*, and *Lord have Mercy upon us* on the Door; and Watchmen attending Day and Night to prevent any one's going in or out, except *Phyſicians*, *Surgeons*, *Apothecaries*, *Nurſes*, *Searchers*, &c. allowed by Authority: And this to continue at leaſt a Month

Month after all the Family was *dead* or *recovered**.

It is not eaſy to conceive a more diſmal Scene of Miſery, than this; Families ſeized with a Diſtemper, which the moſt of any in the World requires Help and Comfort, lockt up from all their Acquaintance; leſt it may be to the Treatment of an inhumane Nurſe (for ſuch are often found at theſe Times about the Sick;) and Strangers to every thing but the Melancholy ſight of the Progreſs, Death makes among themſelves; with ſmall Hopes of Life, and thoſe mixed with Anxiety and Doubt, whether it be not better to Dye, than to ſurvive the Loſs of their beſt Friends, and neareſt Relations.

* Vid. *Directions for the Cure of the* Plague, *by the* College *of* Phyſicians; *and Orders by the* Lord Mayor *and* Aldermen *of* London, *publiſhed* 1665.

If *Fear*, *Deſpair*, and all *Dejection of Spirits* diſpoſe the Body to receive *Contagion*, and give it a great Power, where it is received, as all Phyſicians agree they do, I don't ſee how a Diſeaſe can be more enforced, than by ſuch a Treatment.

Nothing can juſtify ſuch *Cruelty*, but the Plea, that it is for the Good of the whole *Community*, and prevents the ſpreading of *Infection*. But this upon due Conſideration will be found quite otherwiſe: For while *Contagion* is kept nurſed up in a Houſe, and Continually encreaſed by the daily Conqueſts it makes, it is Impoſſible but the *Air* ſhould by Decrees become *tainted*, which by opening Windows, &c. will carry the Malignity firſt from Houſe to Houſe; and

and then from one Street to another. The ſhutting up Houſes in this Manner is only keeping ſo many *Seminaries* of *Contagion*, ſooner or later to be diſperſed abroad: For the waiting a Month, or longer, from the Death of the laſt Patient will avail no more, than keeping a *Bale* of infected *Goods* unpack'd; the Poyſon will fly out, whenever the *Pandora's Box* is opened.

As theſe Meaſures were owing to the Ignorance of the true Nature of *Contagion*, ſo they did, I firmly believe, contribute very much to the long Continuance of the *Plague*, every time they have been practiſed in this City: And no doubt they have had as ill Effects in other Countries.

It is therefore no wonder, that great Complaints were ſometimes

made here againſt this unreaſonable Uſage; which, when they prevailed ſo far, as to procure ſome Releaſe for the *Sick*, were remarkably followed with an Abatement of the Diſeaſe. The *Plague* in the Year 1636 began with great Violence, but Leave being given by the King's Authority for People to quit their Houſes; it was obſerved, That *not one in twenty of the well Perſons removed fell Sick, nor one in ten of the Sick dyed* *. Which ſingle Inſtance alone, had there been no other, ſhould have been of Weight ever after to determine the Magiſtracy againſt too ſtrict Confinements. But beſides this, a preceding *Plague*, viz. in the Year 1625, affords us another Inſtance of a very remarkable Decreaſe upon the diſcontinuing to

* Diſcourſe upon the Air, by *Tho. Cock.*

ſhut up Houſes. It was indeed ſo late in the Year, before this was done, that the near Approach of Winter was doubtleſs one Reaſon for the Diminution of the Diſeaſe, which followed: Yet this was ſo very great, that it is at leaſt paſt diſpute, that the Liberty then permitted was no Impediment to it: For this *opening* of the Houſes was allowed of in the beginning of *September*; and whereas the laſt Week in *Auguſt*, there dyed no leſs than 4218, the very next Week the *Burials* were diminuiſhed to 3344, and in no longer time than to the fourth Week after, to 852 *.

Since therefore the Management in former Times neither anſwers the Purpoſe of *diſcovering the Beginning* of the *Infection*, nor of put-

* Vid. *The ſhutting up of Houſes ſoberly debated. Anno*, 1665.

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ing a ſtop to it when *Diſcovered*, other Meaſures are certainly to be taken; which I think ſhould be of this Nature.

Instead of *ignorant old Women*, who are generally appointed *Searchers* in Pariſhes to enquire what Diſeaſes People dye of, That *Office* ſhould be committed to *Underſtanding and Diligent Men*, whoſe Buſineſs it ſhould be, as ſoon as they find any have dyed after an uncommon Manner, particularly with *livid Spots*, *Buboes*, or *Carbuncles*, to give Notice thereof to the Magiſtrates; who ſhould immediately ſend skilful Phyſicians to Viſit the Houſes in the Neighbourhood, eſpecially of the *Poorer* ſort, among whom this Evil generally begins; and if upon their Report it appears, that a *Peſtilential Diſtemper* is broke out among the Inhabitants,

habitants, They ſhould without Delay order all the Families, in which the Sickneſs is, to be *Removed*; The *Sick* to different Places from the *Sound*; but the Houſes for both ſhould be three or four Miles out of Town; and the *Sound* People ſhould be *ſtript of all their Cloaths*, and *waſhed* and *ſhaved*, before they go into their new Lodgings.

No Manner of *Compaſſion* and *Care* ſhould be wanting to the *Diſeaſed*; to whom, being now in *clean* and *airy* Habitations, there would, with due Cautions, be no great Danger in giving Attendance. All Expences ſhould be paid by the Publick, and no Charges ought to be thought great, which are counterbalanced with the ſaving a Nation from the greateſt of Calamities. Nor does it ſeem to me at all unreaſon-

reaſonable, that a *Reward* ſhould be given to the Perſon, that makes the firſt Diſcovery of *Infection* in any Place; ſince it is undeniable that the making known the *Evil* to thoſe, who are provided with proper Methods againſt it, is the firſt and main Step towards the overcoming it.

When the *Sick Families* are gone, all the Goods of the Houſes, in which they were, ſhould be *burnt*; nay the Houſes themſelves, if that can conveniently be done. And after this all poſſible Care ought ſtill to be taken to remove whatever Cauſes are found to breed and promote *Contagion*. In order to this, the *Overſeers* of the Poor (who might be aſſiſted herein by other Officers) ſhould viſit the Dwellings of all the meaner ſort of the Inhabitants, and where they find them

them *ſtifled up too cloſe* and *naſty*, ſhould leſſen their Number by ſending ſome into better Lodgings, and ſhould take Care, by all Manner of Proviſion and Encouragement, to make them more *cleanly* and *ſweet*.

No good Work carries its own Reward with it ſo much as this kind of *Charity*; and therefore be the Expence what it will, it muſt never be thought unreaſonable. For nothing approaches ſo near to the firſt Original of *Contagion*, as Air pent up, loaded with Damps, and corrupted with the Filthineſs, that proceeds from *Animal Bodies*.

Our common *Priſons* afford us an Inſtance of this, in which very few eſcape, what they call the *Goal Fever*, which is always attended with a Degree of *Maligni-*

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ty in proportion to the *Cloſeneſs* and *Stench* of the Place: And it would certainly very well become the Wiſdom of the Government, as well with Regard to the Health of the *Town*, as in Compaſſion to the *Priſoners*, to take Care, that all *Houſes of Confinement* ſhould be kept as Airy and Clean, as is conſiſtent with the Uſe, to which they are deſigned.

THE *Black Aſſize* at *Oxford*, held in the Caſtle there in the Year 1577, will never be forgot*; at which the *Judges*, *Gentry*, and almoſt all that were preſent, to the Number of 300, were killed by a *poyſonous Steam*, thought by ſome to have broke forth from the *Earth*; but by a *noble* and *great* Philoſopher†

* *Camden. Annal. Regin. Elizab.*

† *Lord Verulam*, Natural Hiſtory, *Cent.* 10. *Num.* 194.

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more juſtly ſuppoſed to have been brought by the *Priſoners* out of the *Goal* into *Court*; it being obſerved, that they alone were not injured by it.

At the ſame time, that this Care is taken of *Houſes*, the proper Officers ſhould be ſtrictly charged to ſee that the *Streets* be waſhed and kept clean from *Filth*, *Carrion*, and all Manner of *Nuſances*; which ſhould be carried away in the *Night Time*; nor ſhould the *Layſtalls* be ſuffered to be too near the City. *Beggars* and *Idle Perſons* ſhould be taken up, and ſuch miſerable Objects, as are neither fit for the common *Hoſpitals*, nor *Work-houſes*, ſhould be provided for in an *Hoſpital of Incurables*.

Orders indeed of this kind are neceſſary to be obſerved at all times,

eſpecially in populous Cities; and therefore I am ſorry to take Notice, that in *theſe* of *London* and *Weſtminſter* there is no good *Police* eſtabliſhed in theſe Reſpects; for want of which the Citizens and Gentry are every Day annoyed more ways than one.

If theſe early *Precautions*, we have mentioned, take Effect, there will be no need of any Methods for *Correcting the Air*, *Purifying Houſes*, or of *Rules for preſerving particular Perſons from Infection*: To all which, if the *Plague* get head, ſo that the *Sick* are too many to be removed, Regard muſt be had.

As to the *firſt*; *Fire* has been almoſt univerſally recommended for this Purpoſe, both by the Ancients and Moderns; who have adviſed to make frequent and numerous

rous *Fires* in the Towns infected: By which Means, it is ſaid, *Hippocrates* preſerved *Greece* from a *Plague*, which was entring into it from *Æthiopia* *. And it is certain, that ſome evil Diſpoſitions of the Air, particularly ſuch as proceed from *Damps*, *Exhalations*, &c. may be corrected by *Fire*; and the Prediſpoſition of it to receive *Infection* from theſe Cauſes ſometimes removed. But when the Diſtemper is actually *begun*, and rages, ſince it is known to be *ſpread* and *increaſed* by the *Heat* of the *Summer*, and on the contrary checked by the *cold* in *Winter*; undoubtedly, whatever increaſes that *Heat* will ſo far add Force to the Diſeaſe. Whether the Service, *Fires* may do by correcting any other ill Qualities of the Air, will

* Galen. de Theriac. cap. 16.

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counterbalance the Inconvenience upon this Account, Experience only can determine; and the Fatal ſucceſs of the Tryals made here in the laſt *Plague*, is more than ſufficient to diſcourage any further Attempts of this Nature; for *Fires* being ordered in all the *Streets* for three Days together, there dyed in one Night following no leſs than 4000; whereas in any ſingle Week before or after, not much above three times that Number were carryed off †.

What has been ſaid of *Fires*, is likewiſe to be underſtood of *firing of Guns*, which ſome have too raſhly adviſed. The proper Correction of the Air would be to make it *freſh* and *cool*. Accordingly the

† Hodges *de Peſte*, pag. 24.

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Arabians *, who were beſt acquainted with the Nature of *Peſtilences*, adviſe People to keep themſelves as *airy* as poſſible, and to chuſe Dwellings expoſed to the Wind.

For keeping *Houſes* cool, they took to be the beſt Method of *purifying* them; and therefore to anſwer this End more fully, they directed to ſtrew them with *cooling* Herbs, as *Roſes*, *Violets*, *Water-Lillies*, &c. and to be waſhed with *Water* and *Vinegar*; than all which, eſpecially the laſt, nothing more proper can be propoſed: Though it be directly contrary to what Modern Authors moſtly adviſe, which is to make Fumes with hot Things, as *Benzoin*, *Frankincenſe*, *Aſa Fœtida*, *Storax*, &c. from which I ſee no reaſon to expect any Virtue

* Rhazes de re Medica, lib. 10. c. 16.

to deſtroy the Matter of *Infection*, or to keep particular Places from a Diſpoſition to receive it; which are the only things here to be aimed at. The *Smoak* of *Sulphur*, perhaps, as it abounds with an *Acid Spirit*, which is found by Experience to be very *penetrating*, and to have a great Power to repreſs *Fermentations*, may promiſe ſome Service this way. But it is of more Conſequence to be obſerved, that as *Naſtineſs* is a great Source of *Infection*, ſo *Cleanlineſs* is the greateſt Preſervative: Which is the true Reaſon, why the Poor are moſt obnoxious to Diſaſters of this Kind.

THE next thing after the *purifying of Houſes*, is to conſider by what Means particular *Perſons* may beſt defend themſelves againſt *Contagion*; for the effectual doing of which it would be neceſſary to put the *Humours*

Humours of the *Body* into ſuch a State, as not to be alterable by the *Matter of Infection.* But ſince this is no more to be hoped for, than a *Specific Preſervative* from the *Small-Pox*; the moſt that can be done, will be to keep the *Body* in ſuch Order, that it may ſuffer as little as poſſible. The *firſt Step* towards which, is to maintain a good State of Health, in which we are always leaſt liable to ſuffer by any external Injuries; and not to weaken the Body by Evacuations. The *next* is, to guard againſt all *Dejection of Spirits*, and *immoderate Paſſions*; for theſe we daily obſerve do expoſe Perſons to the more common *Contagion* of the *Small-Pox.* Theſe Ends will be beſt anſwered by living with Temperance upon a good generous Diet; and avoiding *Faſtings*, *Watchings*, *extreme Weari-*

neſs, &c. *Another* Defence is, to uſe whatever Means are proper to keep the *Blood* from *Inflaming*. This, if it does not ſecure from *contracting Infection*, will at leaſt make the *Effects* of it leſs violent. The moſt proper Means for this, according to the Advice of the *Arabian* Phyſicians, is the repeated Uſe of *acid Fruits*, as *Pomegranates*, *Sevil Oranges*, *Lemons*, *tart Apples*, &c. But above all of *Wine-Vinegar* in ſmall Quantities, rendered grateful to the Stomach by the Infuſion of ſome ſuch Ingredients as *Gentian Root*, *Galangal*, *Zedoary*, *Juniper Berries*, &c. Which Medicines by correcting the *Vinegar*, and taking off ſome ill Effects it might otherwiſe have upon the Stomach, will be of good Uſe: But theſe, and all other hot *Aromatic* Drugs, though much recommended

mended by Authors, if uſed alone, are moſt likely to do hurt by *over heating* the Blood.

But ſince none of theſe Methods promiſe any certain Protection; as *leaving* the Place infected is the ſureſt *Preſervative*, ſo the next to it, is to avoid, as much as may be, the *near Approach* to the *Sick*, or to ſuch as have but *lately Recovered*. For the greater Security herein, it will be adviſable to avoid all *Crouds of People*. Nay it ſhould be the Care of the *Magiſtrate* to prohibit all unneceſſary *Aſſemblies*; and likewiſe to oblige all, who get over the Diſeaſe, to *Confine* themſelves for ſome time, before they appear abroad.

The Advice to keep at a Diſtance from the *Sick*, is alſo to be underſtood of the *Dead Bodies*:

which ſhould be *buried* at as great a Diſtance from Dwelling Houſes, as may be; put *deep* in the Earth; and *covered* with the exacteſt Care. They ſhould likewiſe be *carried out* in the *Night*, while they are yet freſh and free from Putrefaction: Becauſe a Carcaſs not yet beginning to Corrupt, if kept from the Heat of the Day, hardly emits any kind of Steam or Vapour.

As for thoſe, who muſt of neceſſity attend the *Sick*; ſome further Directions ſhould be added for their Uſe. Theſe may be comprehended in two ſhort Precepts. *One* is, not to *ſwallow their Spittle* while they are about the *Sick*, but rather to *ſpit* it out: *The other*, not ſo much as to *draw in their Breath*, when they are very near them. The reaſon for both theſe appears from what has been ſaid above con-

cerning the Manner, in which a ſound Perſon receives the Infection. But in caſe it be too difficult conſtantly to comply with theſe *Cautions*, The *holding* to the *Noſtrils* a *Sponge* wet with *Vinegar*, may in ſome meaſure ſupply their place.

THIS is the Sum of what I think moſt likely to ſtop the Progreſs of the *Diſeaſe* in any Place, where it ſhall have got Admittance. If ſome few of theſe *Rules* refer more particularly to the City of *London*, with ſmall Alteration they may be applied to any other *Place*. It now remains therefore only to lay down ſome Directions to hinder the *Diſtemper's* ſpreading from *Town* to *Town*. The beſt Method for which, where it can be done, is to caſt up a *Line* about the *Town infected*, at a convenient Diſtance; and by placing a *Guard*, to hinder

der People's paſſing from it without due Regulation, to other Towns: But not abſolutely to forbid any to withdraw themſelves, as they have now done in *France*, according to the uſual Practice abroad; which is an unneceſſary Severity, not to call it a Cruelty. I think it will be enough, if all, who deſire to paſs the *Line*, be permitted to do it, upon Condition they firſt perform *Quarentine* for about 20 Days in *Tents*, or other more convenient *Habitations*. But the greateſt Care muſt be taken, that none paſs without conforming themſelves to this Order, both by keeping diligent *Watch*, and by *puniſhing* with the utmoſt Severity, any that ſhall either have done ſo, or attempt it. And the better to diſcover *ſuch*, it will be requiſite to oblige all, who travel in any Part of the Country, under the ſame

Penalties,

Penalties, to carry with them *Certificates* either of their coming from Places not *Infected*, or of their paſſing the *Line* by permiſſion.

This I take to be a more effectual Method to keep the *Infection* from ſpreading, than the abſolute refuſing a Paſſage to People upon any Terms. For when Men are in ſuch imminent Danger of their Lives, where they are; many, no doubt, if not otherwiſe allowed to eſcape, will uſe Endeavours to do it ſecretly, let the Hazard be ever ſo great. And it can hardly be, but ſome will ſucceed in their Attempts; as we ſee fell out in *France* notwithſtanding all their Care. But one that gets off thus clandeſtinely, will be more likely to carry the Diſtemper with him, than twenty, nay a hundred, that go away under

der the preceding Reſtrictions: Eſpecially becauſe the *Infection* of the Place, he flies from, will by this Management be rendered much more intenſe. For confining People, and ſhutting them up together in great Numbers, will make the Diſtemper rage with augmented Force, even to the increaſing it beyond what can be eaſily imagined; As appears from the *Account*, which the learned *Gaſſendus* * has given us of a memorable *Plague*, which happened at *Digne* in *Provence*, where he lived, in the Year 1619. This was ſo terrible, that in one *Summer* out of *ten thouſand* Inhabitants, it left but *fifteen hundred*, and of them all but *five* or *ſix* had gone through the *Diſeaſe*. And he aſſigns *this*, as the princi-

* Notitia Eccleſiæ Dinienſis.

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pal Cauſe of the great Deſtruction, That the Citizens were too cloſely confined, and not ſuffered ſo much as to go to their Country Houſes. Whereas in another *Peſtilence*, which broke out in the ſame Place a year and half after, more Liberty being allowed, there did not dye above *one hundred* Perſons.

For theſe Reaſons, I think, to allow People with proper *Cautions* to remove from an infected Place, is the beſt Means to ſuppreſs the *Contagion*, as well as the moſt humane Treatment of the preſent Sufferers: But though Liberty ought to be given to the *People*, yet no ſort of *Goods* muſt by any means be ſuffered to be carried over the *Line*, which are made of *Materials* retentive of *Infection*. For in the preſent Caſe, when *Infection* has ſeized any Part of a

Country, much greater Care ought to be taken, that no *Seeds* of the *Contagion* be conveyed about, than when the Diſtemper is at a great Diſtance; becauſe a *Bale of Goods*, which ſhall have imbibed the *Contagious Aura* when packt up in *Turkey*, or any remote Parts; yet, when unpackt here, may chance to meet with ſo healthful a Temperament of our Air, that it ſhall not do much hurt. But when the Air of any one of our Towns ſhall be ſo corrupted, as to ſpread and maintain the *Peſtilence* in it, there will be little reaſon to believe, that the Air of the reſt of the Country is in a much better State.

For the ſame Reaſon *Quarentines* ſhould more ſtrictly be enjoined, when the *Plague* is in a bordering Kingdom, than when it is more remote.

I have

I have now gone through the chief Branches of *Preſervation* againſt the *Plague*. And ſhall only add, that if the *Burning of Goods*, which has been propoſed, be thought any Way *offenſive* or *inconvenient*, The *Burying* of them ſix Feet, or more, under Ground may anſwer the Purpoſe as well.

What has been ſaid of the *Nature of Contagion*, upon which the foregoing Directions are grounded, may alſo be of Uſe towards eſtabliſhing a better Method of *Cure*, than *Authors* have commonly taught: But to engage in this is beyond the preſent Deſign.

FINIS.

I have now gone through the chief Branches of Preservation against the Plague. And shall only add, that if the Burning of Goods, which has been proposed, be thought any Way offensive or inconvenient, The Burying of them six Feet, or more, under Ground may answer the Purpole as well.

What has been said of the Manners of Contagion, upon which the foregoing Directions are grounded, may also be of Use towards establishing a better Method of Cure, than Authors have commonly taught: But to engage in this is beyond the present Design.

FINIS.